



Missouri  
Department of  
Natural Resources

# Strategic Plan Summary 2005 to 2009

**December 2005**

# Table of Contents

	Page
<b>Governors' Goals for the Department of Natural Resources</b>	3
<b>Department's Tactical Goals</b>	4
<b>Department's Strategic Goals</b>	5
<b>Public Service</b>	6
<b>Clean, Safe and Abundant Water</b>	7
Missouri and Mississippi Rivers	7
Water quantity	7
Water quality	8
Infrastructure needs	10
<b>Clean Air</b>	12
St. Louis and Kansas City air quality	12
<b>Productive Land</b>	14
<b>Missouri's Energy and Economic Security</b>	16
<b>Enjoyment of Missouri's Natural and Cultural Resources</b>	18
Management of State Parks and Historic Sites to provide outdoor recreation opportunities	18
Preservation of Missouri's significant cultural heritage	19
Preservation of Missouri's significant natural heritage	19
Interpretation of Missouri's natural and cultural resources	20

# Governor's Goals for the Department of Natural Resources

Governor Blunt knows our natural treasures deserve the very best care we can give. He provides leadership necessary to protect our natural resources so our children and grandchildren can enjoy them for years to come.

Protecting and preserving our natural resources requires a balance between advancing economic opportunities, preserving individual property rights, and environmental protection. Individual landowners are the primary stewards of Missouri's natural resources, as such their rights will be recognized and respected.

Missouri should rely on voluntary, market-based approaches rather than government regulation. The Department will continue its efforts in transparency of rulemaking that establishes regulations, through its open, participative rulemaking process.

---

I will lead the fight against changes in Missouri River Master Manual that are detrimental to agriculture. I will adamantly oppose any measure that significantly restricts the quantity of water flowing into our state. I will ask the departments to cooperate on this issue. I will work with the COE for the expansion and improvement of the lock system on the upper Mississippi River. (Pages 5, 7)

I will help lead the fight against changes in the Missouri River Manual that are detrimental to our economy. (Pages 5,7)

DNR will be directed to enhance and protect our natural, cultural and energy resources while demonstrating true and sincere openness to differing points of view. (Throughout plan)

It is essential that we undertake this next round of air quality control measures and emission reductions with the full input of all stakeholders in order to ensure public acceptance and effective implementation. (Pages 5, 12,13)

I will petition the EPA to allow RFG augmented by a 10% ethanol additive made from corn to be used throughout the state. (Pages 5, 13)

I will encourage DNR and the public to work together to resolve problems and to use innovative methods to protect water quality. (Pages 5, 8, 9, 10)

I will see that the process for accessing the Water and Wastewater State Revolving Loan fund is streamlined and easier to access. (Pages 5, 11)

Permit decisions should be made quickly with prompt notification to the applying party. (Page 4)

I will work to repair the perceived rift between DNR and the public. Legislation that ensures DNR's regulations are based on sound science and that the economic benefits outweigh the costs is a positive step.

We should liaise with Arkansas on water quality. (Pages 5, 9)

# The Department's Tactical Goals

These issues affect all Missourians. How we provide service to address these issues is directly related to how the department operates. Movement from reactive solutions to proactive steps will help us address issues earlier, and hopefully with less cost and effort. Constant improvement in our processes with an emphasis on cooperative efforts will allow the department to more effectively address both the difficult issues and our everyday work. Building bridges with the agricultural community and the tourism industry also rank high on the department's list of priorities.

The department has several initiatives. Those initiatives, their impact and results:

Initiative	Description	Impact	Results
<b>Initial assistance visits</b>	An initial visit is offered to newly permitted facilities or those that have never been inspected	Going over permit requirement early in the process will increase understanding. This is also an opportunity to provide assistance and guidance to improve compliance with requirements.	<b>Improved environmental quality</b>  <b>Improved responsiveness to permittees</b>
<b>Automation of permitting processes</b>	Developing the ability to both complete a permit application electronically, and automation of the information flow from the permittee to the department.	By increasing the speed and ease of application for the most frequently issued permits or the simplest will free up staff time to offer more assistance. Automation will also allow for tracking of permit review progress to be accessible to applicants online	<b>Improved environmental quality</b>  <b>Increased efficiency through simplification and automation</b>  <b>Improved responsiveness to applicants</b>
<b>Ombudsmen</b>	Staff have been located throughout Missouri to listen and seek means to resolve issues.	These efforts will increase problem resolution and communication between Missourians and the department.	<b>Improved service, responsiveness and problem resolution</b>
<b>Flexible appropriations</b>	Much of the FY2007 budget proposal had large organizational units combined into larger budget items rather than many separate items.	This flexibility will allow for moving funds and resources to priority needs.	<b>Breaking down silos within the department to enhance service while maintaining accountability</b>

# The Department's Strategic Goals

The Department of Natural Resources strives to protect, preserve and enhance Missouri's natural, cultural and energy resources. We seek to address this mission proactively, identifying issues and problems early before they become major crises. We will actively participate with stakeholders, communities, businesses and the public in this process.

## Water

**Many challenging and encompassing issues facing Missouri's environment deal with water. These will affect our lives, our economy and the state's ability to prosper in the future.**

- > Assure needed water flow in the Missouri River
- > Provide an adequate supply of high quality water. Regional water supply issues in Springfield and southwest Missouri affect water quality and quantity. In north central and northwest Missouri water issues center on the quantity of drinking water.
- > Concentrate our efforts to upgrade an aging wastewater and drinking water infrastructure, especially in major metropolitan areas, with limited financial resources to correct the problem.
- > Implement updated water quality standards to comply with federal law

## Land resources

**Protection and enhancement of productivity takes many forms.**

- > Continue efforts to control soil erosion through funds provided by renewal of the Parks and Soils Sales Tax
- > Redevelop communities through brownfield cleanups. Revitalize and bolster our cities through historic preservation
- > Provide long term stewardship for major sites contaminated by hazardous wastes such as Weldon Spring
- > Ensure the ability of the department to maintain or improve land quality and productivity through management and clean up of hazardous materials through adequate funding.

## Air quality

**Improve St. Louis and Kansas City regional air quality to increase air quality for nearly one half of Missouri's population.**

## Energy

**Missouri needs a long term energy policy that takes into consideration impacts to the environment.**

- > Increase reliance on renewable fuels such as ethanol and biodiesel
- > Bring innovative and environmentally protective energy production to Missouri

## Protect and enhance our State Parks and Historic Sites

- > Provide quality statewide recreation in concert with natural and cultural preservation
- > Renew the Parks and Soils Sales Tax

## Public Service

In order to meet our mission to preserve, protect, restore and enhance Missouri's natural, cultural and energy resources, analysis and assistance must be provided to anyone desiring it, and information provided to serve as the basis for sound decision making. These services are often not strategic, but rather sound business practices. Public service is the cornerstone for all the department does.

### **Increase the department's responsiveness.**

#### Key strategies

- Offer one on one assistance through the department's ombudsmen to communities, the public and businesses to more proactively address problems before they become major issues.
- To enhance environmental compliance, offer permitted facilities an Initial Assistance Visit to go over permit specifications, view the operations, and answer questions. Preventing problems early and helping to gain understanding of requirements will both protect the environment and assist businesses at the least costly time.
- Enhanced use of electronic and Internet resources through an automated permitting processes and increased availability of operational information such as permitting, inspection and enforcement manuals on the Internet.
- Continue the department's policy of setting work hours and hours of operation to meet the needs of our citizens.

### **Increase the operating efficiency of the department.**

#### Key strategies

- Implement use of automated permit applications for quicker turnaround time of permit approval.
- Enhanced use of electronic and Internet resources through an automated permitting processes and increased availability of operational information such as permitting, inspection and enforcement manuals on the Internet. This access to information is for the public to understand the breadth of our work, regulated entities to understand our processes and their requirements, and our staff to have more ready access to needed materials.
- Continually review of department processes, such as permitting, to make them pertinent, effective and as simple as possible for both the user and staff. Review and streamlining these processes will also lay the foundation for automation efforts so that the most efficient and effective processes are automated, not necessarily the current processes that happen to exist.
- Continue to seek opportunities to contract functions, such as routine permit review to expediate issuance, that are cost effective while allowing for accountability of results.

### **Maximize the skills and productivity of the department's workforce.**

#### Key strategies

- Continue efforts to grow a workforce for the department that reflects Missouri, including minorities, women, disabled and veterans.
- Continue cross training employees to deal with multi environmental media where effective, and other supporting efforts to grow a diverse and trained workforce, meet multiple and changing needs and to provide for backup to maintain work flow.

## Clean, safe and abundant water

Water quality decisions we make in Missouri not only enhance our ability to fully enjoy our water, but such improvements can make their way all the way down to the Gulf of Mexico. The Department of Natural Resources works to protect water quality and availability including preventing pollution from impairing our rivers, lakes and streams and our water supply; reducing soil erosion; and engaging other states and the federal government to maintain Missouri's future beneficial uses of interstate waters.

### Missouri and Mississippi Rivers

Number of Missourians served by protecting the quantity of water in the Missouri River for water supply purposes				
	2002	2003	2004	2005
Individuals using the Missouri River for drinking water	1,904,154	1,943,721	1,983,289	2,423,105
Note: Other benefits of the program's work to ensure that the Missouri River has adequate flow include: recreation, agriculture (irrigation and livestock), flood control, fish and wildlife, water commerce, and industrial usage. Approximately 50% of Missouri's population rely on water in the Missouri River as a source of drinking water.				

### Maintain a sufficient flow of water in the Missouri River to support the needs of Missouri's citizens.

#### Key strategies

- Continue to oppose Missouri River Master Manual changes or other policies that negatively impact or restrict Missouri's economy or use of the Missouri River by agriculture, communities, businesses and transportation when there are other options, or where the changes are not scientifically justified in the ongoing interstate discussions, negotiations and resolution of legal issues.
- Continue as the lead agency for interstate river issues and hold membership in such organizations as the Upper Mississippi River Basin Association, the Lower Mississippi River Conservation Committee, and the Mississippi River Parkway Commission to protect Missouri's interest and assist in addressing environmental issues such as hypoxia in the Gulf of Mexico.

### Quantity of water resources

#### Increase the number of groundwater monitoring wells from 72 in 2004 to 78 by 2007.

Number of groundwater monitoring wells in statewide network equipped with satellite telemetry to relay real time water level data in the Internet.				
	2002	2003	2004	2005
Monitoring wells	70	70	72	75
Note: The division goal of 200 wells would allow the state to have at least one well per county with additional wells in the areas of highest groundwater usage, based on approximately 1 well per 3 billion gallons used.				

### Key strategies

- Facilitate options and solutions for drinking water supply problems in Northwest Missouri. Enhance responsiveness by providing onsite staff assistance through the newly opened satellite office in Maryville.
- Continue to monitor groundwater-level declines in the southwestern part of the state (particularly Greene, Christian and Mc Donald counties). Through analysis, propose possible solutions to groundwater shortfalls to local decision makers.

## Quality of Missouri's water resources

Percent of stream miles and lake acres that are safe and usable for the designated beneficial purposes					
	1996	1998	2000	2002	2004
% Stream Miles	52.7%	52.7%	51.5%	48%	50%
% Lake Acres	84.6%	85.4%	94%	69%	71%
Missouri has 22,203 stream miles and 293,759 lake acres classified Data available on a bi-annual basis as reported in the 305(b) report to the US Environmental Protection Agency.					

Major water pollution sources in Missouri's classified waters		
	Percent of classified stream miles	Percent of classified lake acres
Crop production/grazing	34%	15%
Channelization	17%	
Flow regulation		4%
Mining	1%	
Municipal and other domestic point sources		15%
Atmospheric deposition (mercury)	4%	9%
Major contaminants in Missouri's classified waters		
	Percent of classified stream miles	Percent of classified lake acres
Sedimentation/Habitat Degradation	46%	
Low dissolved oxygen		1%
Mercury	4%	9%
Other metals	1%	3%
Nitrogen/Phosphorus		15%
Flow alternation		0%

**Maintain compliance with Missouri's Clean Water Law for permitted facilities and sites inspected by the department at least at the 82% rate after implementation of new clean water standards. Incorporate new water quality based requirements as needed, including disinfection of wastewater discharges to the extent necessary to protect public health.**

National Pollution Discharge Elimination System (NPDES) permitted facilities in compliance with state and federal Clean Water Act, including monitoring and reporting requirements			
	2003	2004	2005
Inspections of permitted entities	1596	1670	1281
Percent of facilities inspected and in compliance	87.3%	82.4%	69.2%
Permit holders for control of discharges to the waters of the state of Missouri			
Municipals	893	899	791
Non-municipals	2,207	2,222	2,153
Concentrated Animal Feeding Operations	444	446	438
Stormwater	6,419	7,470	6,532
General	1,662	1,627	1,601

<b>Stream miles protected for whole body contact recreation</b>			
	<b>2005</b>	<b>2006</b>	<b>2007</b>
Stream miles	5,531	20,471	18,793

#### Key strategies

- Pursue opportunities to resolve water quality problems with a variety of stakeholders including use of innovative technology.
- Offer initial assistance visits to newly permitted facilities or those that have never had an inspection to enhance compliance, understanding of permit requirements, and adhering to environmental requirements from the outset.
- Working with stakeholders, state, local and federal partners, and the regulated community, promulgate water quality standards that meet federal requirements by April 2006.
- Continue efforts with Arkansas and Oklahoma to resolve water quality issues to ensure clean water for Missourians.
- Increase the technical assistance provided to cities, counties and permittees to enhance understanding of effective and efficient erosion control practices.
- Increase inspection of land disturbance permittees to ensure protection of both land and water resources.
- Focus efforts on mercury pollution from power plants, medical and hazardous waste incineration; cement kilns and dental waste that pose a particularly significant threat to Missouri's rivers and streams.
- Establish TMDLs for bodies of water to determine the most effective course of action to increase compliance with Missouri's Clean Water Law.
- A lack of financial resources threatens the stormwater protection program. Seek needed resources and implement a full stormwater protection effort.
- Conduct Use Attainability Analyses to determine where waters can support whole body contact recreation so that appropriate standards on those waters are set.

**Increase the number of stream segments with approved TMDLs from 63 in 2003 to 119 by 2007.**

<b>Stream segments subject to one of the following actions: TMDL completed, permits issued to resolve the impairment, or delisting due to data showing attainment of uses</b>				
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Number of Actions	4	35	18	13
Cumulative number of actions approved by EPA	28	63	81	94
12 TMDL's are scheduled to be completed in 2006				

<b>Total dollars of grants awarded for water quality studies</b>			
	<b>2003</b>	<b>2004</b>	<b>2005</b>
New Grant Funds Available	\$6,234,582	\$4,344,992	\$5,144,916
Grant Funds Awarded	\$3,958,357	\$2,753,884	\$1,958,535
Recipients of water quality study grants			
Government Entities	12	11	23
Nonprofit Organizations	7	5	5
Educational Institutions	7	10	3

<b>Total amount of funds expended to fully or partially restore impaired waterbody segments identified on the 303(d) list pursuant to the Clean Water Act.</b>			
	<b>2003</b>	<b>2004</b>	<b>2005</b>
Dollars expended	\$2,780,605	\$3,129,996	\$3,694,038

<b>The number of waterbody segments removed from the 303(d) list as a result of restoration.</b>			
	<b>2003</b>	<b>2004</b>	<b>2005</b>
Waterbody segments restored and removed from the 303(d) list	26	0**	0**
<p>The 303(d) list is developed every two years.  The 1998 303(d) list is used as a baseline.  The 2002 303(d) list was submitted to EPA by the department in August 2002 (FY2003). Final EPA action was not taken until December 2003  EPA did not require Missouri to submit a 303(d) list 2000.  **During 2004, the Clean Water Commission directed the department to establish new methodology for development of the 303(d) list. This has resulted in an effort to combine the 2004 303(d) list with the 2006 303(d) list.</p>			

### Key strategies

- Work with local entities to encourage the development of locally led voluntary watershed management plans.
- Provide technical assistance to communities in Northwest Missouri seeking to develop additional surface water resources to meet drinking water needs.
- Identify surface water use trends to evaluate needs in an effort to ensure adequate surface water resources for industrial, agricultural, municipal and domestic use.

## **Water Infrastructure Assistance**

**Maintain infrastructure assistance through low interest loans and grants to construct or improve wastewater treatment, public drinking water and stormwater facilities.**

<b>Amount of low-interest loans awarded to eligible local governments for construction and improvement of their water or wastewater infrastructure and for controlling urban stormwater</b>			
	<b>2003</b>	<b>2004</b>	<b>2005</b>
Construction of public and animal wastewater treatment facilities	\$189,063,207	\$273,747,839	\$45,840,858
Stormwater control	\$725,000	\$0	\$0
Rural water, sewer, and other	\$5,897,000	\$1,182,965	\$13,414,600
Construction of drinking water systems	\$22,735,000	\$14,815,000	\$37,825,000

<b>Amount of grants awarded to eligible local governments for construction and improvement of their water or wastewater infrastructure and for controlling urban stormwater.</b>			
	<b>2003</b>	<b>2004</b>	<b>2005</b>
Stormwater control	\$0	\$10,202,021	\$0
Forty percent grants	\$8,036,150	\$2,017,537	\$1,000,000
Rural water, sewer and other	\$6,178,340	\$5,658,579	\$1,250,000
<p>FY 2003 Stormwater Control grant applications were not awarded until FY 2004.  No bond sales occurred during fiscal years 2004 or 2005. Grant and loan awards were made from remaining balance of previous bond sales.</p>			

<b>Communities utilizing the infrastructure loan and grants program</b>			
	<b>2003</b>	<b>2004</b>	<b>2005</b>
Construction of public and animal wastewater treatment facilities	34	19	16
Stormwater control	0	67	0
Rural water, sewer and other	54	23	15
Construction of drinking water systems	9	7	8

### Key strategies

- Make participation in the State Revolving Fund more feasible by simplifying and streamlining application requirements.
- Seek resources to increase the staff to provide direct assistance to communities in comprehensive water and wastewater site evaluations, design capacity of existing facilities and to inspect facilities under construction.
- Seek to develop and implement areas of the Drinking Water State Revolving Fund that would extend eligibility of the Fund to privately owned public water systems as allowed under the federal Safe Drinking Water Act.
- Seek resources for the rural water grant program that provide assistance to publicly owned community water systems in small rural communities.
- Investigate the use of the State Revolving Fund to assist with security vulnerability assessment and emergency planning efforts.
- Establish field positions to increase awareness of the State Revolving Fund and to facilitate assistance to eligible entities.

## Clean Air

Clean air sustains us and keeps us healthy. Pollutants in air can cause early death, aggravate a variety of heart and lung problems including chest pains, and trigger asthma and other breathing problems. Other pollutants can have toxic effects, including effects on fetal and child development, and some have carcinogenic potential.

For Missouri, the major challenge affecting clean air is air quality in the St. Louis and Kansas City areas. Discussion about air quality control measures to address these issues involves local communities, citizens, businesses and interest groups to come to remedies that will be supported and effective.

### St. Louis and Kansas City air quality

Daily average 8-hour ozone values																
	90-92	91-93	92-94	93-95	94-96	95-97	96-98	97-99	98-00	99-01	00-02	01-03	02-04	03-05	04-06*	05-07*
St. Louis MSA	98	91	91	98	104	100	95	95	94	90	90	92	89	89	89	89
Kansas City MSA	83	82	82	90	92	94	93	91	89	84	85	84	82	83	83	83
Springfield MSA	71	70	69	75	79	78	73	73	78	75	76	73	70	73	73	73

The eight-hour National Ambient Air Quality Standard is 85 ppb, to be determined as follows: For each site, the fourth highest daily eight-hour average for each year of a consecutive three-year period are averaged. The site with the highest value determines the design value for the area. If the design value is 85 ppb or greater the area is in violation.

\*Projected

Number of ozone alert days											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
St. Louis area total	20	31	15	6	30	37	23	11	24	28	
Kansas City area total	2	11	1	3	10	21	6	16	14	5	
Springfield total	0	0	1	0	1	4	1	0	1	2	

Number of ozone alert days continued						
	2000	2001	2002	2003	2004	2005
St. Louis area average	17	13	31	10	0	25
Kansas City area total	12	4	12	12	0	13
Springfield total	1	1	1	0	0	0

An 'ozone alert day' is a day when at least one monitor in the area recorded an exceedance (.085 ppm) and corresponds to an Air Quality Indicator of orange (unhealthy for sensitive groups) or higher. The 8-hour standard is an average of eight 1-hour values, using a rolling forward average. The 8-hour average for 10 a.m. is the average of the hourly values for 10 a.m. to 6 p.m.

\*Projected

Annual averages at highest PM 2.5 concentration sites								
	98-00	99-01	00-02	01-03	02-04	03-05	04-06*	05-07*
St. Louis	17.3	16.4	15.2	15.4	14.4	13.4	14	14
Kansas City	14.1	13.4	14.2	14	13.3	12	12	12
Springfield	12.2	12.3	12.2	12.6	11.7	10.9	11	11

**Improve air quality to attain or maintain the following:**

- **Attainment of the federal 8 hour ozone and PM 2.5 standards in St. Louis area by 2010, and**
- **Maintenance or attainment of the federal 8 hour ozone and PM2.5 standards in the Kansas City area by 2010.**

Key strategies

- Continue work with stakeholders in industry and environmental groups to find common-sense ways to reduce regulatory burden and costs without sacrificing air quality
- Petition the EPA to allow RFG augmented by a 10% ethanol additive made from corn to be used throughout the state.
- Continuously improve the vehicle emission testing program in order to achieve maximum air quality gains and maximum customer convenience.
- Evaluate ways in which we can work with other agencies to address asthma concerns, and other air related health and environmental problems specific to Missouri.
- Continue regular meetings with stakeholders through the Air Advisory Forum to find ways to improve the program through a free exchange of ideas, open discussion and consensus building.
- Proactively look for potential topics and issues to bring before the Forum for discussion.
- Develop the St. Louis State Implementation Plans for the eight-hour ozone and PM<sub>2.5</sub> standards with stakeholders in both Missouri and Illinois.

## Productive Land

**Reduce erosion on approximately 3.7 million acres through financial assistance to reach our goal of 95 percent of Missouri's agricultural land eroding at tolerable rates or less.**

Percentage of agricultural land eroding at the rate which is tolerable* ("T")			
1982	1987	1992	1997
64.50%	70.20%	76.30%	80.90%
Source: Natural Resources Inventory (NRI)			
Timeframe: data reported every 5-years from Natural Resource Conservation Service (USDA) 2002 data is not yet available.			
*Tolerable means that the amount of soil erosion does not have a significant effect on soil productivity.			

Cumulative tons of soil saved through financial assistance opportunities (millions of tons)									
1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
37.38	51.49	60.62	65.90	68.66	72.00	76.50	81.00	84.31	87.7
Source: Program database summaries of regular cost share, Special Area Land Treatment (SALT) cost share and Agricultural Nonpoint Source (AGNPS) projects									

Soil saved per incentive grant per practice (tons)					
2000	2001	2002	2003	2004	2005
490	510	506	450	445	487
Source: Data is calculated by dividing the tons of soil saved in a particular year by the landowners receiving financial assistance for a practice. The calculations are based on research conducted by the US Natural Resource Conservation Service.					

Efficiency in requests processed				
	2002	2003	2004	2005
Cost Share Claims processed	8400	8173	7487	7433
Requests for waivers*	37	23	16	12
*Not included in calculation below.				
Appeals to Commission	7	16	19	14
Percentage of landowner claims processed that meet the program rules and policies	99.9%	99.8%	99.7%	99.8%

### Key strategy

- Working with partners in both the agricultural and parks communities, seek renewal of the Parks and-Soils Sales Tax before 2008.

**Maintain administrative support and training for Missouri's 114 locally elected soil and water conservation district boards and their employees.**

### Key strategies

- Provide assistance to district boards at board meetings and other opportunities.
- Support district efforts to track finances through an automated accounting system.
- Utilize problem-solving skills to help district boards deal with challenging administrative issues such as personnel, finances and cooperative projects.
- Develop and monitor contracts to conduct independent audits of districts.

**Maintain the number of cleanups completed each year at least at 200 per year.**

<b>Brownfields/VCP cleanups completed (annually)</b>										
<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
2	9	16	16	20	25	26	33	44	45	28

Key strategies

- Work with department staff and the Department of Economic Development to develop Brownfields to revitalize their urban cores along with preserving historic resources.
- Finalizing the Tri-party Federal Facility Agreement and implement the Long-Term Surveillance and Maintenance Plan for Weldon Spring which sets out all activities, including acquisition of land use controls, necessary to ensure protection of human health and the environment.
- Apply the Risk Based Corrective Action document to facilitate risk based cleanup and appropriate reuse of property that results in economic development and protection of human health and the environment. Improve and enhance long-term procedures to monitor and enforce institutional controls and long-term stewardship.

## Missouri's Energy and Economic Security

The Department works to ensure that Missouri's energy supplies are adequate, diverse and reliable and produced and used in an environmentally sound manner. Two major areas of focus are energy efficiency and the development and use of Missouri's renewable energy resources which contribute to self-sufficiency and fuel diversity and benefit Missouri's energy security, environment and economy.

Energy consumed by fuel type in Missouri									
	1994	1995	1996	1997	1998	1999	2000	2001	2002-2004*
Fossil fuels	91.2%	92.5%	93.0%	93.1%	93.2%	93.4%	93.0%	94.0%	NA
Nuclear	6.5%	5.2%	5.3%	5.3%	4.9%	4.8%	5.9%	4.8%	NA
Hydroelectric	1.2%	1.1%	0.7%	0.8%	1.3%	1.0%	0.2%	0.5%	NA
Other renewable	1.2%	1.2%	1.0%	0.8%	0.7%	0.8%	0.9%	0.7%	NA
* Data provided by the US Department of Energy has a several year lag in reporting.									

Trillion BTU's of renewable energy consumed in Missouri	2002	2003	2004	2005
	5.28	7.55	7.76	8.39 (projected)

Total Missouri energy expenditures by fuel type (\$ million)									
	1994	1995	1996	1997	1998	1999	2000	2001	2002-2004*
Electricity	3,749	3,892	3,962	4,002	4,195	4,186	4,370	4,414	NA
Petroleum	4,705	4,927	5,840	5,769	5,147	5,759	7,062	6,990	NA
Natural Gas	1,281	1,171	1,519	1,591	1,368	1,341	1,736	2,363	NA
Coal	42	43	41	50	42	42	35	41	NA
Other	14	15	16	12	10	11	16	13	NA
Total	\$9,791	\$10,048	\$11,378	\$11,424	\$10,762	\$11,339	\$13,220	\$13,822	NA

Comments: Fossil fuels consist of coal, natural gas and petroleum minus ethanol contained in transportation fuels. "Other" energy use includes direct heat or electricity produced by wind or solar.

\*Data provided by the US Department of Energy has a several year lag in reporting.

Renewable energy consumption includes biomass (ethanol, biodiesel, industrial and utility wood use, biogas from wastewater treatment plants and landfills), solar, and wind energy sources. Non-fossil resources not included are hydroelectric generation (due to its year-to-year variations that would reduce the value of the data series as an indicator); residential charcoal and wood use, consumption of crop waste, as it is not produced as a fuel, and waste tires.

**Continue to participate in forums on energy use and policy at local, state and federal levels, as well as monitoring and analyzing information to inform policymakers and the public.**

### Key strategies

- The Missouri Energy Center will continue to integrate work with the Missouri Public Service Commission and the DNR Air Pollution Control Program to increase energy efficiency and

new technologies in order to decrease the negative environmental impact of energy development and use and to mitigate the impact of energy price volatility.

- Recommend actions in support of clean Missouri alternative energy to achieve the economic, environmental, energy security and public health benefits associated with diversified energy sources.
- Seek additional resources to assist the state in aggressively pursuing energy-efficiency improvements in state buildings using performance contracting.
- Monitor federal discussions about federal energy policies and processes to identify and represent Missouri's interests.
- Monitor, analyze and report on Missouri's energy supplies and prices to policymakers and the public to determine actions to promote dependable, affordable and environmentally sound production, distribution and use of energy.

## Enjoyment of Missouri's Natural and Cultural Resources

The health and vitality of Missouri's State Parks and historic sites are heavily dependent upon healthy air, clean water, protected land and rich cultural resources. They are the culmination of our efforts to protect our state's environment and cultural resources.

	1998	1999	2000	2001	2002	2003	2004	2005
Number of State Park visitors	17,309,592	18,253,665	17,905,808	18,103,273	17,760,076	17,060,086	17,120,989	17,317,708
Number of vehicles*	4,802,375	5,475,069	6,033,080	5,666,408	6,046,324	4,987,091	4,837,103	5,169,193
Number of camping permits	293,422	290,943	308,697	293,559	286,899	278,467	280,747	301,543

Number of vehicles is accumulation of those reported, not all parks and sites report the number of vehicles. Therefore, it is an estimate of the number of vehicles at DSP facilities.

Satisfaction of State Park visitors				
	2001	2002	2003	2004
Visitor satisfaction with facility operation and maintenance	94%	92%	90%	92%

Percent of state budget allocated to State Parks compared to national and regional averages.			
	2002	2003	2004
Cost per visitor	\$1.70	\$1.64	\$1.73
% state budget allocated to State Parks compared to:			
regional average	0.23%	0.20%	0.19%
national average	0.22%	0.21%	0.20%
in Missouri	0.17%	0.15%	0.17%

## Management of Missouri's State Park System to Provide Outdoor Recreation Opportunities

**Maintain overall satisfaction with facility operation and maintenance at the satisfied level or higher.**

### Key strategies

- Working with partners, seek renewal of the Parks and-Soils Sales Tax before 2008. Seek additional funding beyond traditional means to enhance facilities to meet the needs of visitors, such as larger campsites with upgraded electricity.
- Support and increase the number of State Park volunteers to both increase the projects completed and to provide a sense of ownership in Missouri's resources.
- Continue to expand the service offered through the contracted campground reservation system to address both customer and park operation needs.
- Continue efforts to replace or upgrade water and wastewater infrastructure.
- If the federal Land and Water Conservation Fund is fully funded establish guidelines to allow for use of a portion of these funds for Missouri state agency projects
- Clarify and enhance the working relationship between the State Park Foundation, other friends groups and non-profits

- Seek means to provide the needed Information Technology infrastructure, including GIS systems, in the system so operations progress efficiently to meet both visitor needs and the mission to preserve natural and cultural resources.
- Continue participation in interstate and national discussion groups to examine ways to develop ongoing partnerships with public agencies and private organizations in support of National Historic Trails.

## Preservation of Missouri's Significant Cultural Heritage

### Increase the preservation of Missouri's cultural resources

Documentation of cultural resources in the Missouri State Park System			
	2003	2004	2005
Projects that potentially effect archaeological sites	404	469	475
Number of decreased threats to cultural resources	100	65	123
Percentage of properties surveyed of those reviewed	14%	16%	32%
Number of cultural resources assessments and treatment projects	14	21	37
Number of completed cultural resource management plans	3	1	1
Percentage of artifacts entered into automated cataloging system	32.0%	35.8%	37.8%
Number of archaeological properties identified and evaluated	404	469	475

#### Key strategies

- Document and evaluate threats to cultural resources to seek means to reduce the deterioration of these resources.
- Provide greater interpretation of minority or under represented historical and cultural themes.
- Work with partners in the redevelopment of the Missouri State Penitentiary in Jefferson City, the oldest prison west of the Mississippi River.
- Strengthen relations with tribal governments through consultation about State Parks, interpretation and repatriation.

## Preservation of Missouri's Significant Natural Heritage

### Decrease the threats and increase the preservation of native species and environments in State Parks.

Number of acres preserved in the State Park system			
	2002	2003	2004
State Parks acres in Ecological Stewardship Areas	67,167	67,687	68,117
Acres designated as Natural Areas and Natural Heritage Sites	16,500	16,591	17,021
Threats reduced through land acquisition (threats such as noise pollution)	10	15	9
Number of acres acquired that reduce threats to watersheds or habitats	367	280	71

Data are collected by calendar year; therefore, 2005 numbers are not yet available.

Increase the quantity of State Park lands zoned for preserving Missouri's natural heritage themes, native species and environments; and expand planning efforts for them			
	2002	2003	2004
Percent of natural landscape themes in State Parks	65%	72%	72%
Percent of natural landscape regions in State Parks	79%	84%	84%
Percent of Missouri's rare and endangered species found in State Parks	21%	22%	22%

Percent of Missouri's land area in State Parks	0.31%	0.31%	0.31%
Number of biological inventory and monitoring programs completed	74	65	70
Total number of acres managed by prescribed fire	31,592	31,808	31,885
Number of acres added to the division-wide prescribed fire program	970	216	77
Number of acres prescribed burned on State Park lands in the post-fire season	7,937	11,160	6,089

#### Key strategies

- Make natural resource data available to managers and the public by adding to the number and scope of biological inventory and GIS databases.
- Participate in the Missouri Bird Conservation Initiative and the Important Bird Area project.
- Preserve and restore natural environments through prescribed fire, ecosystem restoration, exotic species control or other means.

## **Interpretation of Missouri's Natural and Cultural Resources**

### **Increase the opportunities for interpretation of Missouri's natural and cultural resources**

<b>Interpretation of natural and cultural resources in the State Park system</b>				
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Number of interpretive programs presented	29,307	29,555	40,014	48,998
Percent of visitors participating in interpretive programming *	9%	9.3%	8.63%	8.16%
Percent of visitors surveyed who were satisfied or very satisfied with interpretive programming	N/A	N/A	N/A	99%

\* Calendar 2005 through the end of October 2005

#### Key strategies

- Continue coordination of the Lewis and Clark Bicentennial through 2006, including the last National Signature Event in St. Louis.
- Complete the work of the Interpretive Themes Taskforce resulting in recommendations. Develop an action plan to implement approved recommendations that includes who, what, when and the deliverable product.
- Make sure that Missouri is represented on the national commission to keep us in the forefront of the funding and activities surrounding the 150<sup>th</sup> commemoration of the Civil War.